

Can official advice improve mortgage-holders' perceptions of switching? An experimental investigation

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Abstract: *Encouraging consumers to seek out and switch to lower-rate mortgages is important both for the individual consumer's finances and for functioning competitive markets, but switching rates are low. We conducted an experiment with mortgage-holders to test whether official advice on how to select good mortgage products and how to navigate the switching process alters perceptions of switching. The experiment shows that the advice made consumers more sensitive to interest rate decreases and more favourable towards switching at longer terms. It also increased consumers' confidence in their ability to select good offers. The findings imply that advice from policymakers can change perceptions and increase switching rates.*

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1. Introduction

For the typical consumer, purchasing a mortgage is the largest credit decision they will make. While they may search for low interest rates initially, the length of repayment terms and complexity of mortgages and interest rates can mean that consumers end up paying more in the long-run. A willingness to refinance with another provider to avail of cheaper interest rates during the lifetime of the mortgage is hence important, from both a consumer welfare perspective and for the functioning of competitive markets.

Encouraging refinancing with another provider (“switching”) has gained increasing regulatory focus. In this paper, we present an experiment motivated by a change in regulatory policy in Ireland to promote transparency in switching. An addendum to the Consumer Protection Code (2012), announced in the summer of 2018, stipulated measures to, for example, notify consumers on variable rate mortgages whether they have the potential to move to cheaper interest rates. Another stipulation in this regulation change was to require lenders to provide consumers with a link to a specific advice webpage hosted by the government agency responsible for enforcing competition and consumer protection law in Ireland (the Competition and Consumer Protection Commission). This website provides comprehensive information about the switching process and contains tools to help consumers to find cheaper interest rates.

The policy change prompted the present study in applied behavioural economics. We worked closely with the consumer protection body to design an experiment to test the information they provide to consumers. Primarily, our aim was to determine whether the information that consumers would be directed to under the above policy change has the potential to affect their perception of switching offers. In the experiment, we tested whether reading the consumer advice altered how a sample of mortgage-holders evaluated switching offers, how they perceived the transaction costs of switching and how they perceived their own competence to make these judgements. We also tested whether they understood the main properties of mortgage offers or held some false beliefs after reading the advice. For each of these factors, we assessed the impact on willingness to switch.

Our findings suggest that advice that informs consumers about the important features of switching offers and provides them with details of the switching process can significantly alter how they perceive switching. After reading the consumer advice, the mortgage consumers in our experiment became more sensitive to large gains in interest rates, began to factor in the repayment term and were less discouraged from switching by their perception of the process. Although our experiment was motivated by a change in regulations in the Irish market, the findings have relevance for markets elsewhere and highlight the potential of soft regulatory changes to help consumers make more informed decisions about mortgages.

2. Background

Although mortgages constitute a majority of consumer debt and substantial savings can often be made from switching to a lower annual percentage rate (APR), the rates at which mortgage-holders do so are notoriously low. Even considering the transaction costs of switching (Klemperer, 1987), the vast majority of consumers who have the potential to make large savings from refinancing fail to do so, in both European and US markets (e.g., Miles, 2004; Campbell, 2006; Bajo & Barbi, 2014; Andersen et al., 2015; Devine et al., 2015; Johnson et al., 2016).

Among the minority of consumers who do switch, a small body of research has highlighted some commonalities in their socio-economic characteristics. Younger and more educated mortgage-holders with higher incomes are more likely to take advantage of the savings to be made from switching (Andersen et al., 2015; Brunetti et al., 2015; Keys et al., 2016). Less research has examined how different features of the mortgage might be associated with switching rates. One analysis of refinancing decisions in Italy found that, among mortgage-holders with higher incomes and higher educational attainment, those with higher principals and longer repayment terms were more likely to make optimal refinancing decisions, especially when large decreases in APR were available (Bajo & Barbi, 2014).

Some research has tested consumers' judgement when purchasing a mortgage. One frequent factor shown to influence decisions is the extent to which consumers display steep time discounting, weighting short-term financial outcomes substantially more strongly than long-term ones. For example, although some financially sophisticated consumers who anticipate higher future incomes choose mortgages with lower introductory rates in order to back-load costs and smooth consumption, these same rates may also attract short-sighted consumers who don't have the same expected income gains (Cocco, 2013; Agarwal et al., 2015; Atlas et al., 2017; Gathergood & Weber, 2017; Amromin et al., 2018). The risk of being unable to meet these future repayments is exacerbated by the complexity of mortgages as a financial product – consumers who don't understand some features of their contract are more likely to hold these back-loaded mortgages (Bucks & Pence, 2008).

Given evidence on time preferences, promoting a behaviour with benefits that don't materialise until the long term may seem inherently difficult. However, a desire for immediate rewards can also be leveraged to encourage switching. Following an increased regulatory focus on enhancing switching provisions, banks have begun to entice consumers to their products with immediate cash incentives, which can be advertised as a fixed lump sum or as a proportion of the outstanding mortgage. These "cashback offers" have become prevalent in mortgage markets in Ireland, the UK and Canada, and have the potential to exploit consumers who may be disproportionately attracted to upfront benefits at the expense of longer-term costs (e.g. Rowe et al., 2015). Indeed, mortgages with cashback offers in these three countries typically have higher interest rates than those without, with total cost differences of up to €30,000 over the lifetime of the mortgage (King & Singh, 2018).

It is plausible that consumers might favour mortgages with cashback offers for strategic reasons, such as liquidity constraints or to pay for the legal fees associated with switching. However, a recent experiment with Irish consumers suggests such rationales are unlikely. When King & Singh (2018) presented consumers with two mortgage offers with equivalent immediate financial consequences (e.g. a mortgage of €300,000 with €6,000 cashback and a required deposit of €50,000, versus a lower-interest mortgage with no cashback and a deposit of €44,000), they preferred the cashback offer. Importantly, the perceived attractiveness of the cashback offer diminished when differences in total costs were made salient. To the best of our knowledge, no experimental research has examined how varying different attributes of a mortgage offer affects how attractive consumers perceive switching to be. As such, our first research question was exploratory in nature:

(1) What attributes of a mortgage offer affect consumer perceptions of switching offers?

Time preferences may also reduce switching if consumers perceive substantial transaction costs, which we refer to as the "hassle" of switching. Upfront time, financial and psychological commitments required to refinance may be aversive, given that the primary financial benefits will not be experienced until later in the lifetime of the mortgage. Importantly, these costs need not be perceived accurately in order to act as a barrier to switching. One survey of over 2,000 mortgage-holders found that, of those who had considered switching, half cited concerns with the complexity of the process as a reason not to, whereas far fewer of those who had

switched thought the process was overly complicated (Central Bank, 2017). Our second research question targeted consumers' perceptions of the switching process:

(2) How much does the perceived hassle of switching influence willingness to switch?

One signal that perceived hassle may exceed actual transaction costs is the finding that consumers who score higher on measures of financial literacy tend to be more likely to switch (e.g. Johnson et al., 2015). While these consumers may perceive the switching process more accurately, they may also find it personally more manageable or feel more competent to execute it successfully. Moreover, a significant minority of consumers report being unaware of the exact costs involved and cite a lack of information as a reason not to engage (Keys et al., 2016; Central Bank, 2017), despite the fact that these consumers have previous experience with purchasing a mortgage. One issue with using measures of financial literacy to predict financial behaviour is the discrepancy between perceived financial ability and objectively-measured ability (e.g. Kramer, 2016), which may be especially important for mortgage decisions. It is well established that people are more likely to take ambiguous bets if they perceive themselves as competent in that domain (e.g., Heath & Tversky, 1991). If consumers perceive the switching process as ambiguous or uncertain, only those who feel competent to make decisions about their mortgage may attempt to do so, regardless of the actual hassle involved. Hence, we were also interested in the following:

(3) How much does competence (either perceived or objectively measured) influence willingness to switch?

Importantly, consumer understanding of mortgage products can be improved via carefully constructed communication. For example, information disclosures can help consumers to choose cheaper mortgage products (Nicholson et al., 2018) and behaviourally-informed disclosures can improve comprehension of different mortgage features (Lacko & Pappalardo, 2010). Hence it is plausible that simple but comprehensive information about mortgage switching may improve perceptions of transaction costs and aid understanding of mortgage products in general, thereby increasing the likelihood that consumers will switch and obtain the associated long-term savings.

This possibility was one explicit goal of the addendum to consumer protection policy announced by Ireland's Central Bank in June 2018. The provisions of this addendum increased transparency for consumers. At the end of a fixed rate period, providers must now notify consumers with a summary of available interest rates that could provide savings. Consumers on a variable rates must be notified regularly of rates to which they could switch and save money. Of central importance for this paper, providers must now direct their consumers to the relevant section of the Competition and Consumer Protection Commission's website, which explains the switching process, outlines factors to consider when choosing between mortgage products, and contains a price comparison tool.

Working closely with the Competition and Consumer Protection Commission, we designed an experiment to explore how mortgage-holders perceive different types of switching offers and how this perception changes after reading the advice from their website. Hence, our final and over-arching research question was:

(4) Do the answers to (1), (2) and (3) change if the mortgage-holder reads consumer advice on switching their mortgage?

3. Method

The study was conducted in line with institutional policy for the ethical conduct of research.

3.1 Participants

Participants were 110 mortgage consumers recruited by a market research agency to be broadly representative of the adult population of mortgage-holders. There were 52 women and 58 men, aged 24 to 64 years ($M = 43.05$ years, $SD = 8.80$). Sixty-five (59%) were educated to degree level or higher, 97 (88%) were in fulltime employment and the median reported income (after tax) was €2,501 to €3,500 per month. They undertook the experiment on individual laptops in groups of 5 to 10, but were unable to see each others' screens and were instructed that each participant would see different offers throughout. They received a €30 fee for taking part and were entered into a draw for one of five €100 shopping vouchers.

3.2 Design, Materials and Procedure

The experiment was programmed using PsychoPy (Peirce, 2007; code and materials available at <https://osf.io/pev8b>) and proceeded over three stages. After a demonstration of how to use the experimental programme, in Stage 1 participants rated their willingness to switch to a series of mortgage offers, which took approximately 25 minutes. They were then given a 5-10 minute tea break before continuing with the experiment. In Stage 2, they used a simulated price comparison tool, the purpose of which was to test some features of the regulator's website. In Stage 3, they were presented with multiple choice questions that probed their comprehension of mortgages. Last, they completed an unrelated experiment on energy efficiency certificates before answering some general background questions. For the purpose of this paper, we focus on the rating task in Stage 1 and the multiple choice questions in Stage 3.

Stage 1 consisted of four blocks of rating tasks. We employed a within-groups, pre-post design to test the effect of the consumer advice: after the first two blocks, each participant read advice adapted from the CCPC website, and they then completed two final blocks. Hence, participants acted as their own controls (see Charness, Gneezy & Kuhn, 2012).

Within each block, participants were endowed with an example of a typical mortgage. They were informed of the total outstanding, monthly repayments, APR and remaining term for this endowed mortgage, and were instructed that it had reached the end of its fixed term. The participants were then presented with a series of six alternative mortgages and their task was to rate how likely they would be to begin the switching process for each of them (leading to 24 individual decisions – giving 2,640 total observations). To avoid participants making relative judgements between the different alternatives, we asked them to imagine that each was the best alternative available. In addition, because the decision over whether to switch is likely to be driven by the strength of the mortgage-holders willingness to do so, we treated the decision over whether to switch as if it is on a spectrum rather than a dichotomous choice. Participants responded on a scale from 1 “Definitely Would Not” to 7 “Definitely Would”. This response format and the overall design had the added benefit of allowing variation in responses, meaning that we could detect subtle differences in the influence of different attributes on decisions. Note that no other labels, only numbers, appeared on the response scale, which we therefore treat as interval.

The mortgages presented within each of the four blocks varied according to a number of experimental manipulations, which were designed to answer each of the research questions presented in Section 2.

3.2.1 Attributes

Endowed mortgages were set at the typical switcher’s mortgage in Ireland: €220,000 with 22 years left until full repayment. We kept this amount and term for two of the endowed mortgages, but to test whether term until repayment matters for switching we shortened it on the other two to 15 years (with an outstanding amount of €120,000). Half of the sample were randomly assigned to see the 22-year mortgage first and the other half saw the 15-year mortgage first. The endowed mortgages always had an APR close to the middle of the range of available mortgages in the switching market in September 2018 (3.05 to 3.75%), and the monthly repayments and total to repay information were calculated based on this randomly selected APR. An example endowed mortgage is depicted in Figure 1.

Alternative mortgages varied on several key attributes. First, the APR was randomly selected from the full range of available APRs in the switching market in September 2018 (2.3% to 4.5%). The experiment was designed such that there were six alternative mortgages for each endowed one: two from the lower end of the range (2.3% to 3%), two from the same middle range (3.05% to 3.75%) and two from the higher end of the range (3.8% to 4.5%). Within each of these range bands, one mortgage was described as fixed (for 3 years) and the other was variable.

Please try to imagine that the following is your current mortgage. You don't need to memorise it - you will be shown the same mortgage again before you have to make any decisions - but please take some time to review it carefully.

Outstanding Amount:	€120,000.00
Term Remaining:	15 years
APR:	3.35%
Monthly Repayment:	€849.05
Total to Repay:	€152,829.00

If you have any questions, please ask the instructor. Otherwise, if you are ready to continue with the study, click "Next".

Next

Figure 1. Example endowed mortgage.

Because all major Irish mortgage lenders advertised cashback offers in September 2018, we included a cashback offer on each alternative. In line with market rates and advertisements, we varied on each offer the cashback amount and how it was presented. One mortgage within each range band had a “low” cashback offer, equal to 2% of the outstanding mortgage amount, and the other had a “high” cashback offer, equal to 3% of the amount. For half of the participants, cashback offers were advertised in this percentage form, while for other half cashback was expressed as a Euro amount. Figure 2 shows an example offer rating task.

The alternative mortgages were presented in random order. An example summary of a block of offers is presented in Table 1. In this summary, the cashback is presented in Euro (rather than percentage form) and correlates with the type of APR. For this participant, high cashback on the 22-year mortgage was associated with a fixed APR, so high cashback on the 15-year mortgage was associated with the variable APR. Overall, the design was such that the correlations between the varied attributes were zero, allowing us to isolate the effects of each attribute on participants' judgements.

Table 1

Example Alternative Offers for an Endowed 22-Year Mortgage (of €220,000)

Attribute	Alternatives					
Offer No.	1	2	3	4	5	6
APR	3.30%	4.00%	2.90%	2.75%	3.90%	3.65%
Type	Fixed	Variable	Variable	Fixed	Fixed	Variable
Cashback Offer	€4,400	€6,600	€6,600	€4,400	€4,400	€6,600

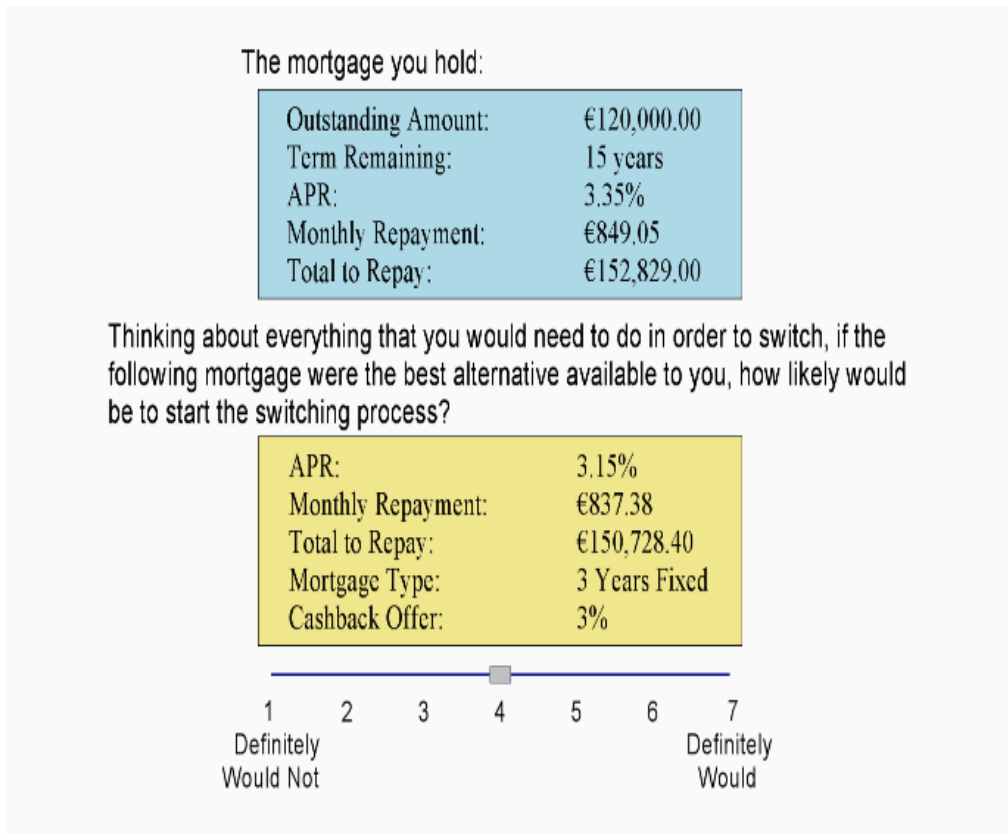


Figure 2. Example offer rating task. The endowed mortgage is €120,000 to be repaid over 15 years. The offered mortgage APR is from the middle of the range, it is fixed for 3 years and the cashback offer is high in percentage form.

3.2.2 Perceived Hassle

We estimated the impact of the perceived hassle of switching through two manipulations. First, to prime one group of participants with the hassle of switching, half the participants were told at the beginning of the experiment that the mortgage switching process is similar to the mortgage application process. They were asked to take some time to think about the mortgage application process that they went through to get their own mortgage and about what they think would be involved in switching their mortgage to another provider. They were then asked to write everything they could think of into a document that was open on the laptop, and they were given 5 minutes for this task. The other participants were given no such task. We hypothesised that participants who reflected on the switching process would be more conscious of the hassle involved and be more likely to factor it into their subsequent judgements.

Second, to test whether removing consideration of the hassle altered their judgements, we varied whether the participants were asked to rate the alternative mortgages for themselves or for a friend. Initially, they were asked to imagine that the endowed mortgage was their own and to rate the subsequent switching offers, thinking about everything they would need to do in order to switch. For the next block of ratings, the endowed mortgage was described as their friend's mortgage. They were asked to rate whether they thought their friend should switch to each of the offers, bearing in mind that their friend was only interested in getting a good deal. We hypothesised that any difference in ratings between the "Own" judgements and these "Friend" judgements could be attributed to the hassle involved in switching.

The following is your friend's current mortgage.
Again, you don't need to memorise it - you will be shown the same information again before you need to make any decisions - but please take some time review it carefully.

Outstanding Amount:	€220,000.00
Term Remaining:	22 years
APR:	3.75%
Monthly Repayment:	€1,225.05
Total to Repay:	€323,413.20

If you have any questions, please ask the instructor. Otherwise, if you are ready to continue with the study, click "Next".

[Next](#)

Figure 3. Example Friend mortgage.

3.2.3 Competence

We assessed competence in two ways. First, we asked participants to rate their confidence in their ability to judge mortgage offers on a scale from 1 "Not at all Confident" to 7 "Very Confident". We refer to this measure as "perceived competence". We collected it at three points: before making any judgements, after making the first two blocks of judgements but before reading the consumer advice, and after reading the

advice. This approach allowed us to estimate perceived confidence before engaging with the rating task, after engaging with the task and after reading the advice.

Second, in Stage 3, we assessed objective understanding of mortgages through a series of incentivised multiple choice questions (MCQs). Some of the questions were adapted from previous research (e.g. Gathergood & Weber, 2017; details can be found in the online appendix). Five questions probed comprehension of how different features of a mortgage are related: three tested understanding of the respective relationships between the monthly repayments, the repayment term and the total cost, while the other two tested understanding of how the APR relates to the monthly interest rate and the total cost. The other five questions probed conceptual knowledge: the difference between fixed and variable rates, debt liability, APR compounding, interest-only mortgages and how cashback is calculated. Importantly, we constructed the questions such that none needed any calculations, but instead required participants to demonstrate understanding of the general mechanism. For example, the question about the APR and total cost relationship was:

Mary and Ann each have fixed-rate mortgages of €80,000 with 10 years left to repay. Mary's APR is 3.2% and Ann's APR is 3.6%. Who has lower monthly repayments?

- (a) Mary
- (b) Ann
- (c) They have the same monthly repayments
- (d) It is impossible to tell

In this question, the participant needs only to understand that, all else is equal, the person with the lower APR has lower monthly repayments. Questions were presented in random order and possible responses were randomised (except for "All of the above" responses, which were always presented as the last option). Participants were instructed to try their best, and were told that each correct answer would earn another entry into the draw for the shopping vouchers.

3.2.4 Consumer Advice

To test the impact of consumer advice, a booklet was adapted from the information on the Competition and Consumer Protection Commission's "Switching Your Mortgage" webpages (available in the online

appendix; original content available at <https://www.ccpc.ie/consumers/money/mortgages/switching-lenders-or-mortgage/>). Participants were given the booklet to read for up to 10 minutes after completing the first two sets of ratings. It had four main sections: (1) Things to Consider, which outlined the importance of understanding one's current mortgage and defined the difference between fixed and variable rates; (2) Costs Involved, which described types of fees that may be applied and provided estimates; (3) Special Offers, which compared the long-term effects of high cashback offers and interest rates; and (4) How to Switch, which summarised the required documentation and the length of the switching process.

4. Results

4.1 Mortgage Attributes

Data and analysis code are available at <https://osf.io/pev8b>. Participants used the full range of the scale when rating mortgage offers. The mean rating was 3.88 ($SD = 2.19$). A primary relationship of interest was between ratings and the difference in APR between offers. Examination of descriptive data revealed a step-jump once the offer had a lower APR than the endowed mortgage. Considering this alongside the broader regulatory goal of encouraging homeowners to switch to better value mortgages, we focus our analysis on offers where there was an APR gain^d. The relationship between mean ratings and the APR gain was also not smooth, with departures from linearity and some evidence of discontinuities close to salient gains (0.5 and 1.0 %-points). For the main analysis, therefore, we grouped offers into three categories of APR gain: 0.05-0.45; 0.50-0.95; 1.00-1.45. The results that follow are not sensitive to these precise boundaries. Variation in mean ratings by these categories of APR gain is shown in Figure 4. Participants responded with diminishing sensitivity to the APR gain, especially prior to reading the advice.

For offers with an APR gain, ratings were left-skewed, with the majority falling between 5 and 7, plus a tail of ratings at 4 and below. We combine these lower ratings into a single category and employ the resulting four-category variable as our primary dependent variable, with zero indicating a rating of 4 or below and 3 indicating a maximum positive rating of 7. Mean scores on this variable across participants were approximately normally distributed (Shapiro-Wilk, $p = .191$), consistent with normal variation in the underlying propensity to switch. We use mixed-effects ordered logistic regression to estimate the influence of the various independent variables, assuming a normally distributed random effect across participants (a random intercept model), with robust standard errors clustered by participant. Eleven participants who produced only ratings that were all 5 or below or 6 and above are dropped from the analysis presented below. Our results are not sensitive to this exclusion or the abovementioned estimation strategy, which is

^d Ninety per cent of the offers that would not have saved the participant money were given scores at the midpoint or lower on the scale. Analysis of these “bad” switching offers can be found at <https://osf.io/pev8b>.

employed to maximise variation in the dependent variable while satisfying normality assumptions. Closely similar results can be obtained using the full sample, ordinal models across the full range of ratings, estimation via OLS, or generalised linear models with a binary dependent variable defined at one of various cut-offs on the rating scale.

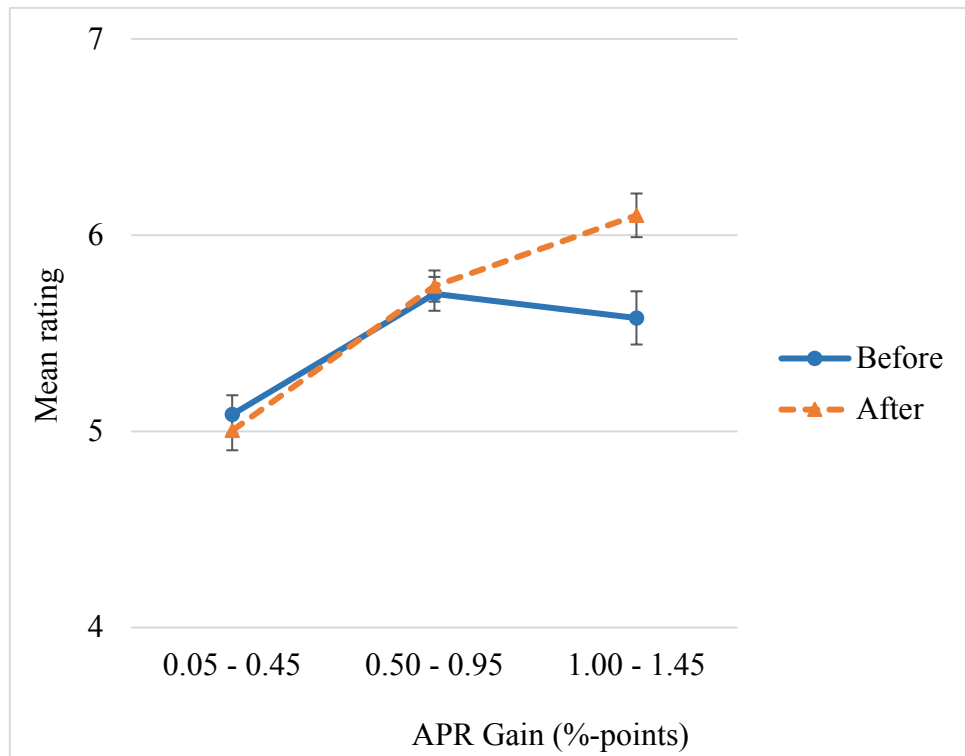


Figure 4. Mean ratings for willingness to switch to offers with lower APR, before and after reading switching advice. Error bars are standard errors.

Results of the main regressions are presented in Table 2, with separate models shown for before and after reading the advice. Fitting the model with a full set of interactions between the independent variables and whether the rating was given before or after reading the advice produces almost identical results, so separate models are shown to aid interpretation. Coefficients displayed in bold have a statistically significant interaction with having read the advice, $p < .05$.

In Model 1, willingness to switch is regressed on the various attributes of the mortgage offers subject to experimental manipulation: the APR gain, whether APR was variable or fixed, whether cashback was high

or low, how cashback was presented, and the mortgage term remaining. Before reading the advice, participants gave significantly higher ratings when there was an APR gain, $p < .001$, but in keeping with the descriptive results in Figure 4 they displayed strong diminishing sensitivity – the coefficient for offers with APR gains of 1.00 %-point and above is lower than for gains of 0.50-0.95. Participants were also more willing to switch to a high cashback offer, $p < .001$. Given the nonlinear effect of APR gain, it is not possible to benchmark this estimated coefficient on cashback perfectly against an equivalent difference in APR, but a reasonable and conservative approximation can be calculated. Comparing with the coefficient estimated for the first 0.50 %-point APR gain, the implication is that participants' decisions, on average, equated the additional cashback with an APR gain of 0.39 % points.^e For the typical switcher's mortgage of €220,000 over 22 years at 3.2% APR, this implies an exchange of €2,200 now for €11,800 repaid over the lifetime of the mortgage – equivalent to a loan with an effective interest rate of 24.2%. Before reading the advice, ratings were unaffected by whether the mortgage rate was variable or fixed, whether the cashback was expressed in percentage or Euro terms, or whether the remaining mortgage term was 15 or 22 years. With respect to the latter, for a given interest rate the overall monetary saving is higher the longer the outstanding term. Extending the model to include an interaction between APR gain and term reveals that this too is non-significant.

After reading the advice, participants gave greater weight to the APR gain, while sensitivity to gains in APR increased. A test for equality of coefficients finds that APR gains of 1.00 %-point and above were rated more highly than those of 0.50-0.95 %-points, $\chi(1) = 5.98$, $p = .01$. The full interaction model confirms that the increase in ratings given to the best APR gains after reading the advice is highly significant, $\beta = 0.90$, $p < .01$. The coefficient on cashback more than halved – a significant reduction, $\beta = -0.67$, $p < .01$. After reading the advice, participants also became sensitive to the term of the mortgage, giving significantly higher ratings to offers over 22 versus 15 years, $\beta = 1.11$, $p < .05$.

4.2 Perceived Hassle

^e This calculation is very conservative, since the estimated coefficient for a 1%-point APR gain is no greater.

Model 2 tests the manipulations designed to gauge the impact of the perceived hassle involved in the mortgage switching process. Participants asked to reflect on what the switching process would entail listed between one and ten items ($M = 4.4$, $Mdn = 4$, $SD = 2.1$). We introduce a variable for whether they listed a low or high number based on a median split – other categorisations yield a similar effect. Participants who listed few items had a significantly lower inclination to switch relative to the control group who were not asked to reflect on the process at all and, especially, relative those who listed a large number of items. At first sight this may appear counterintuitive: hassle ought to be greater for those who perceive a greater number of effortful tasks or stipulations. However, the results are in keeping with the notion that much of the perceived hassle surrounds the uncertainty of not knowing exactly what is required to switch mortgage and, perhaps, the need to discover and process this information. This possibility is supported by the fact that the significantly lower ratings among participants who listed few items were no longer evident once they had read the advice.

The importance of perceived hassle is confirmed also by significantly higher ratings given to offers in respect of a friend as opposed to oneself. Again, this effect was no longer significant once the advice had been read, although the interaction model does not reveal a significant change in the coefficient, which remains positive. In principle, reflecting on the switching process might have magnified the difference between ratings for a friend and for oneself, but an additional test of the interaction between the two measures produces no significant effect. Relating these effects to APR gain, using the same conservative comparison as for cashback above, the perceived hassle was equivalent to a gain in APR of 0.26-0.29 %-points before reading the advice (equal to approximately €8,400 extra over the course of a typical switcher's mortgage).

In addition to the impact on willingness to switch, the specific items listed by participants when reflecting on the switching process can give some insight into the extent to which mortgage-holders understand the process. Two of us (ST and MB) coded the items into categories using a framework developed from the advice read by the consumers (with an additional item for life insurance). Inter-rater agreement was high (mean $\kappa = 0.80$) and disagreements were resolved through discussion and consensus. As shown in Figure 5,

most participants were aware that in order to switch they would need to provide financial information, such as bank statements, proof of credit or savings history, as well as proof of income or employment. However, few participants listed additional aspects of the switching process. In particular, only around one third of this sample of mortgage-holders mentioned any sort of legal aspect to the switching process and only around one quarter thought about the revaluation of their property. In fact, the requirement to engage a solicitor and to have the property revalued typically constitute the largest direct transaction costs when switching a mortgage in Ireland.

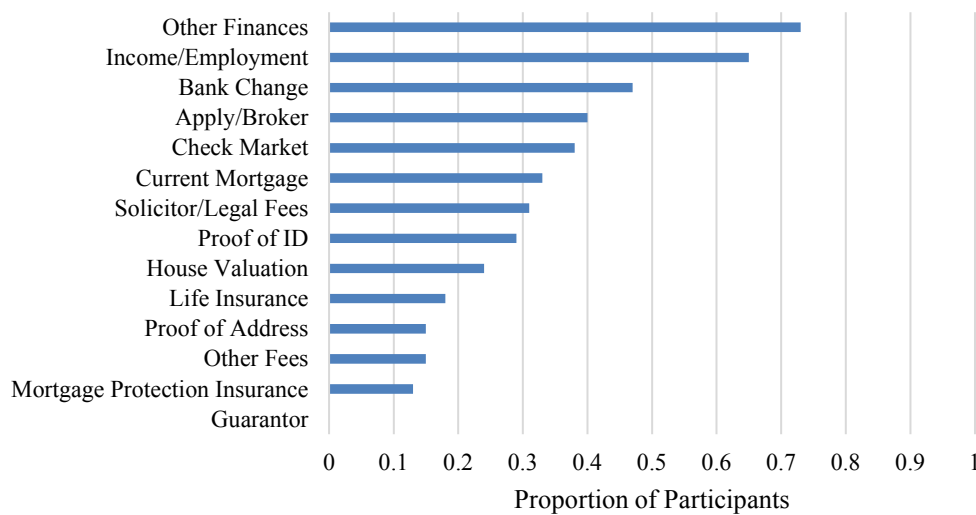


Figure 5. Hassle items reported by participants in the writing task. See the online appendix for a full description of items.

4.3 Competence

We estimated the effect of competence through “perceived competence” (see above) and the number of correct responses to MCQs, which we refer to as “objective competence”. Perceived competence didn’t change significantly from before participants rated any offers ($M = 4.89$, $SD = 1.50$) to after they rated the first two blocks ($M = 5.01$, $SD = 1.36$), Wilcoxon matched pairs, $z = -1.05$, $p > .25$. Importantly, participants did report feeling more confident in their ability to judge mortgage offers after reading the consumer advice ($M = 5.55$, $SD = 1.22$), $z = -5.69$, $p < .001$. Turning to objective competence, the mean number of correct

responses to the 10 MCQs was 6.94 ($SD = 1.59$). There was a modest positive relationship between perceived and objective competence ($\rho = 0.44$ and 0.51 , for before and after reading the advice respectively).

Model 3 adds these competence variables as regressors. Specifying variables for confidence before and after reading the advice to the respective specifications shows that participants who reported feeling more confident in their ability to judge mortgage offers gave significantly higher ratings for willingness to switch. The impact on ratings of objective confidence, as measured by the number of correct MCQs, was highly significant both before and after reading the advice. Note that perceived competence was associated with willingness to switch even when objective competence was controlled for in the same model.

4.4 Background characteristics

Lastly, we collected information on gender, age, income and educational attainment. We found no evidence of significant relationships between ratings for willingness to switch and the first three of these background characteristics. However, before reading the advice, the 44 participants (40%) without a degree-level qualification produced lower mean ratings than those with a degree (5.04 , $SE = 0.18$, versus 5.74 , $SE = 0.10$, Wilcoxon rank-sum $z = -3.18$, $p < .01$). After reading the advice, this gap narrowed (5.43 , $SE = 0.16$, versus 5.60 , $SE = 0.12$, $z = -0.87$, $p = .38$). The increase in ratings of those participants without a degree was marginally significant (Wilcoxon matched pairs, $z = -1.90$, $p = .06$). Adding a dummy variable for having a degree to the models in Table 1, however, does not produce statistically significant effects. The higher mean ratings among those without a degree were mostly driven by a small number of participants who gave consistently low ratings for all offers before reading the advice. As anticipated, given randomisation into conditions, adding the variables for background characteristics has no meaningful impact on the estimates for mortgage attributes in Table 2. Interestingly, it also has no substantive effect on the coefficients estimated for the number of items listed when reflecting on the switching process or for the competence measures. Thus, the results appear to apply broadly across social groups.

Table 2. *Mixed Effects Ordered Logit Models Predicting Willingness to Switch*

	(1)		(2)		(3)	
	Before	After	Before	After	Before	After
APR Gain (<i>Ref: 0.05-0.45</i>)						
0.50-0.95	1.42*** (0.21)	1.55*** (0.25)	1.45*** (0.21)	1.56*** (0.25)	1.43*** (0.21)	1.55*** (0.25)
1.00-1.45	1.16*** (0.25)	2.25*** (0.33)	1.19*** (0.25)	2.28*** (0.33)	1.21*** (0.25)	2.27*** (0.33)
Fixed rate (<i>Ref: Variable</i>)	-0.21 (0.20)	0.14 (0.20)	-0.19 (0.20)	0.01 (0.20)	-0.19 (0.20)	0.00 (0.20)
High Cashback (<i>Ref: Low</i>)	1.12*** (0.20)	0.43* (0.20)	1.13*** (0.20)	0.43* (0.20)	1.12*** (0.21)	0.44* (0.20)
Cashback in € (<i>Ref: %</i>)	0.08 (0.31)	0.14 (0.35)	0.11 (0.30)	0.20 (0.34)	-0.09 (0.28)	-0.06 (0.35)
22-year term (<i>Ref: 15 Years</i>)	-0.30 (0.31)	0.90* (0.36)	-0.31 (0.31)	0.88* (0.36)	-0.38 (0.28)	0.91** (0.34)
Switching list (<i>Ref: No list</i>)						
1-4 items listed			-0.74* (0.38)	-0.12 (0.38)	-0.38 (0.33)	0.19 (0.41)
>4 items listed			0.51 (0.37)	0.78 [†] (0.37)	0.50 (0.34)	0.72 [†] (0.39)
Friend (<i>Ref: Own</i>)			0.83* (0.35)	0.47 (0.35)	0.84* (0.35)	0.46 (0.35)
Confidence rating					0.34* (0.13)	0.29 [†] (0.15)
MCQs correct					0.27*** (0.10)	0.31*** (0.11)
Order	0.04* (0.02)	0.08** (0.03)	-0.06 (0.05)	0.02 (0.05)	-0.06 (0.05)	0.03 (0.05)
Var(Constant)	1.68 (0.34)	2.34 (0.62)	1.58 (0.32)	2.23 (0.52)	1.22 (0.29)	1.88 (0.53)
Obs.	600	595	600	595	600	595
Participants	99	99	99	99	99	99

[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$; Pairs of coefficients in **bold** indicate a significant ($p < .05$) change from before to after.

5. Discussion

The results show significant effects of reading consumer advice on how mortgage-holders perceive switching offers. Before reading the advice, participants demonstrated diminishing sensitivity to gains in APR above 0.5%-points and strongly preferred mortgages with higher cashback offers to lower ones, all else equal. After the advice, they became more sensitive to larger gains in APR, began to consider the length of the repayment term, and were less tempted by cashback offers. Broadly, mortgage-holders placed more weight on factors that would lead to larger long-term savings after reading the advice. Given the clear direction of this effect and the magnitude of savings involved, which run to many thousands of Euros on a typical switcher's mortgage, the implication is that in the absence of helpful advice these sums may be routinely and unwittingly foregone.

The experiment also sought to determine the extent to which perceptions of the switching process affect willingness to switch. Before reading the advice, participants' willingness to switch to offers that would save them money depended on how many tasks or stipulations they could list and was lower than they would recommend to a friend. These effects did not persist after reading the consumer advice. Based on our analysis of the switching tasks listed by participants, we suspect that the original effect was driven by poor understanding of the switching process. Most mortgage holders did not list the two largest direct transaction costs: legal fees and revaluation. Those who listed few items were less inclined to switch than those who listed more. Hence, in addition to helping consumers to identify mortgage features linked to long-term savings, consumer advice may increase the willingness to engage with the switching process by increasing knowledge and comprehension of it.

Mortgage-holders who felt more competent in their ability to judge offers were more willing to switch. This finding is consistent with the competence hypothesis, that people are more

willing to take risks if they perceive themselves as more competent in the relevant domain (Heath & Tversky, 1991). Importantly, confidence increased after reading the advice, adding further support to the suggestion that directing consumers to the advice and its impact remained when an objective measure of understanding was controlled for.

This latter objective measure was itself positively related to stated willingness to switch, even after background characteristics including educational attainment and income were controlled for. This is arguably an important finding for policymakers seeking to encourage switching.

In the ongoing debate about the appropriate use of behaviourally informed policy, generating persuasive evidence of true preferences in the face of inconsistent preferences is not straightforward (Beshears et al., 2008). Some comfort can be had from the knowledge that participants in the current study who demonstrated objectively better understanding were also stated a stronger inclination to switch.

Where regulatory policy mandates providers to direct consumers to obtain specific advice, it is important to empirically test whether that advice can alter perceptions in such a way as to induce beneficial decision making. Examining perceptions of switching offers in a laboratory experiment allowed us to systematically examine the impact of different mortgage attributes, the impact of perceptions of the switching process and how perceived competence might influence switching decisions. By designing our materials in collaboration with the national consumer protection regulator and basing key decisions about stimuli (APR, outstanding mortgage, cashback) on the market, we believe that the experiment provides some insight into the mechanisms that underlie real-world decisions. Moreover, although some features may be representative of specific national markets (e.g. cashback), the general issue of consumer focus on the short-term is a more universal problem. The findings imply potential to shift this focus to long-term savings through the use of a relatively soft intervention (in this case, simply directing consumers to impartial advice) with minimal regulatory burden. They

also demonstrate that it is possible to use laboratory experiments to test official advice empirically. Iterative testing could lead to substantial improvements in effectiveness.

Of course, there are important caveats associated with making inferences from hypothetical, lab-based decisions. We didn't examine, nor was it our aim to examine, every factor that might influence an individual's decision to switch. For example, we eliminated references to provider names, meaning that we didn't capture potentially important effects of consumer-bank relations. Suspicions of lender motives and trust in the mortgage-provider can influence decisions to switch (e.g. Johnson et al., 2105). Nonetheless, while a study such as this necessarily simplifies and approximates real-world decisions, it constitutes an experimental test that one would want the policy intervention to pass positively. Had the official advice failed to have a positive impact on perceptions and decisions, it would have cast doubt on the merits of the regulation or, at least, provided good evidence for investing resources to improve the advice and, hence, the effectiveness of the regulation.

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